

IV. Claim 16, 17, 25-27, and 32, drawn to a reaction mixture comprising a plant or microorganism cell that produces a galactosyltransferase, classified in class 435, subclass 193.

V. Claim 50-52, drawn to a cell that produces a sulfotransferase, classified in class 435, subclass 193.

VI. Claims 53-71, drawn to a method of producing a product saccharide comprising contacting a microorganism or plant cell with an acceptor saccharide, wherein the cell comprises an enzymatic system for forming a nucleotide sugar and a recombinant glycosyltransferase which catalyzes the transfer of a sugar from the nucleotide sugar to the acceptor saccharide to produce the product saccharide, classified in class 435, subclass 97.

According to the Examiner, generic claims 1-3, 6-11, 18, 24, 28, 31, and 38-49 are generic only to Groups I-V. The Examiner maintains that the inventions are distinct, each from the other. According to the Examiner, the allegedly distinct inventions of Groups I-V are unrelated. The Examiner correctly cites the applicable regulations for the proposition that inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). According to the Examiner, the fucosyltransferase of Group I, the sialyltransferase of Group II, the β 1,4-GalNAc transferase of Group III, the galactosyltransferase of Group IV, and the sulfotransferase of Group V are independent chemical entities and require different literature searches. The Examiner contends that a search of each of the inventions of Groups I-V in the patent and non-patent literature cannot be made without serious burden because the inventions require separate searches that have different limits, boundaries, scope, and subject matter.

The Examiner maintains that each of the inventions of Groups I-V are related to the invention of Group VI as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). The Examiner maintains that the process for using the products as claimed can be practiced with other materially different products such as using chemical reagents and catalysts

in a chemical synthesis of a saccharide. For example, Kovac *et al.* teach the chemical synthesis of methyl beta-glycosides of beta-(1-6)-linked D-galacto-oligosaccharides by a stepwise and a blockwise approach which does not require the use of cell based biological systems or enzymes (see abstract). Furthermore, the Examiner contends that a search of each of the inventions of Groups I-VI in the patent and non-patent literature cannot be made without serious burden because the inventions require separate searches that have different limits, boundaries, scope, and subject matter.

Applicant's Position

Purely in the interest of advancing prosecution and securing rapid allowance of the claims, Applicants elect the claims of Group VI, namely claims 53-71 with traverse. Applicants do not acquiesce that the process claims represent a distinct invention from the product claims of Groups I-V. Likewise, Applicants do not acquiesce that claims 1-52 describe more than one invention.

1. The product claims and process claims are not related as a product and process of making the same as the Examiner alleges.

The process claims are drawn to a method of producing a product saccharide comprising contacting a microorganism or plant cell with an acceptor saccharide, wherein the cell comprises an enzymatic system for forming a nucleotide sugar and a recombinant glycosyltransferase which catalyzes the transfer of a sugar from the nucleotide sugar to the acceptor saccharide to produce the saccharide. ***The product claims are directed to a reaction mixture*** that is useful in the process for producing the product saccharide. Hence, ***the claims are not related as product and process of making the same*** as the Examiner alleges. In view of this technical distinction, the Examiner's restriction based upon product and process of making the same is not proper.

2. The particular glycosyltransferases and nucleotide sugars do not require separate searches.

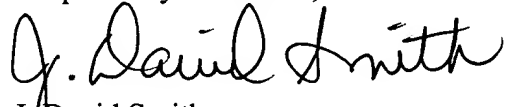
Respectfully, all of the product claims 1-52 describe a reaction mixture for producing a saccharide comprising an acceptor saccharide and a cell that produces a nucleotide sugar and a recombinant glycosyltransferase. This is the unifying characteristic of all of the product claims. The claims that depend from independent claim 1 merely describe particular embodiments featuring particular nucleotide sugars and particular glycosyltransferases. It would not require a separate search of the literature for each glycosyltransferase, as each species is within the scope of the broader genus claimed.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,


J. David Smith
Reg. No. 39,839

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, California 94111-3834
Tel: (415) 576-0200
Fax: (415) 576-0300
JDS:tc
SF 1183148 v1